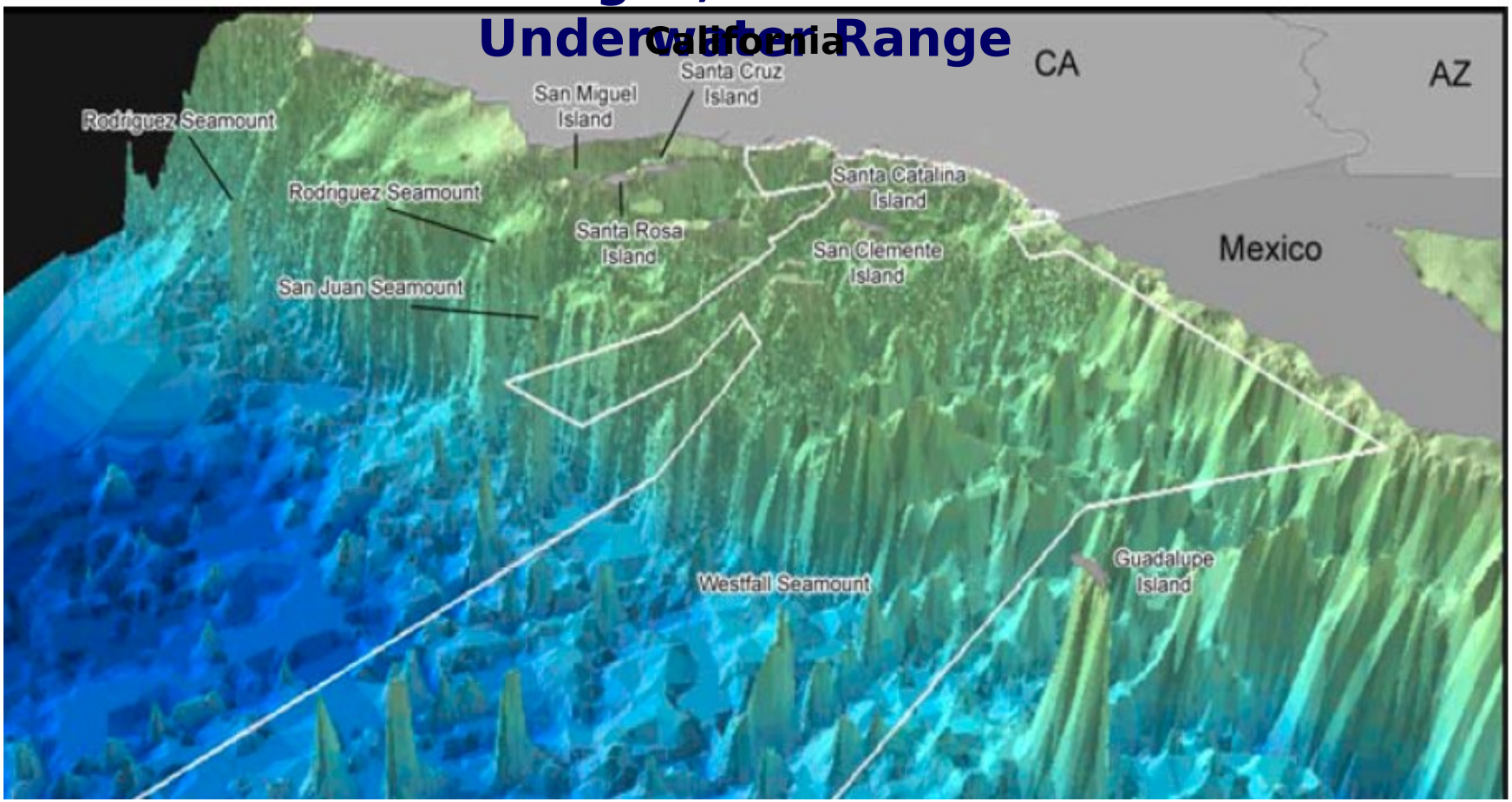
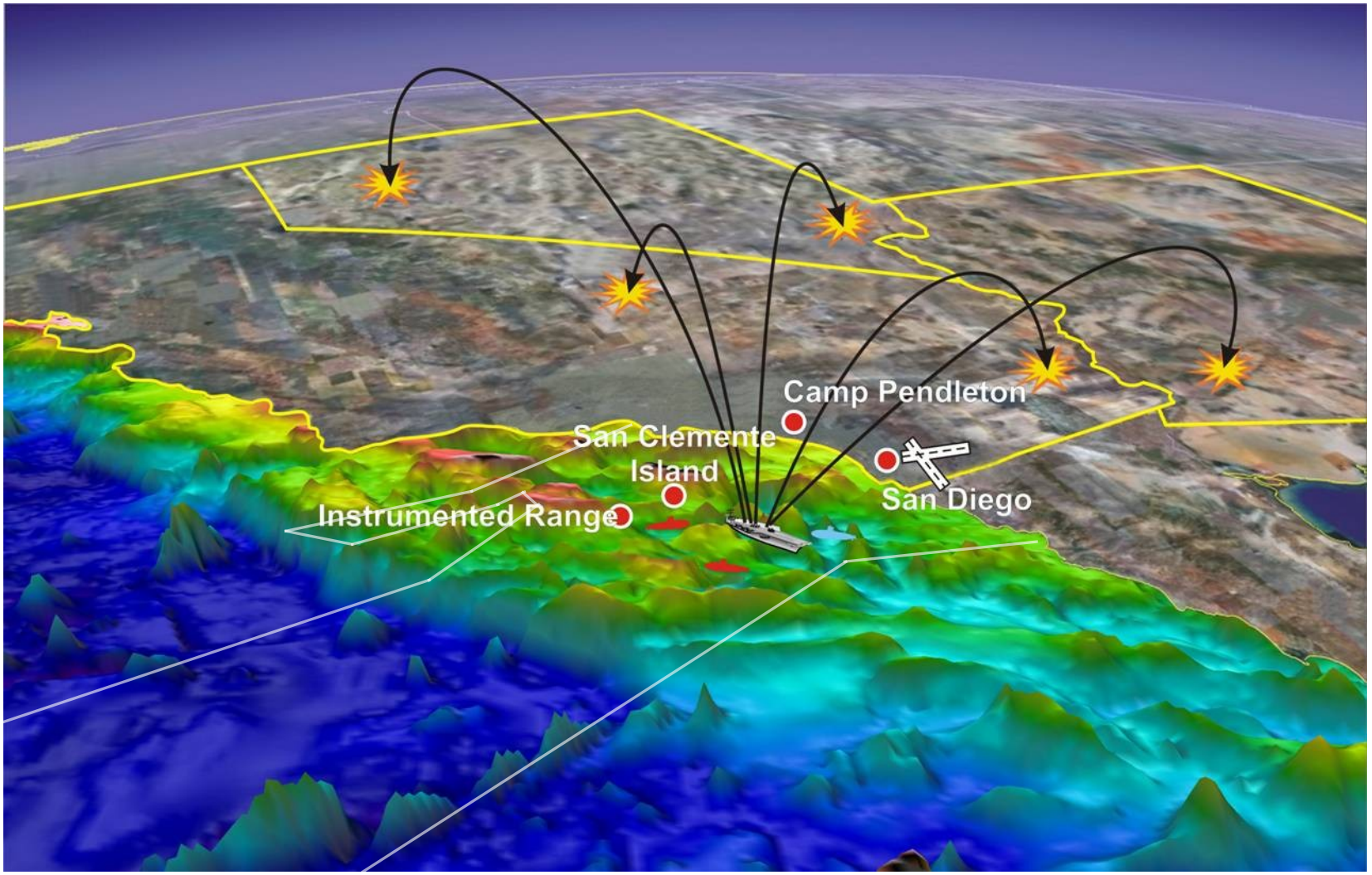
Why the Southern California Operating Area?

The Northeastern portion of the operating area offers: Shallow Water, Steep Bathymetry, Underwater Ridges, and the Instrumented Underwater Range



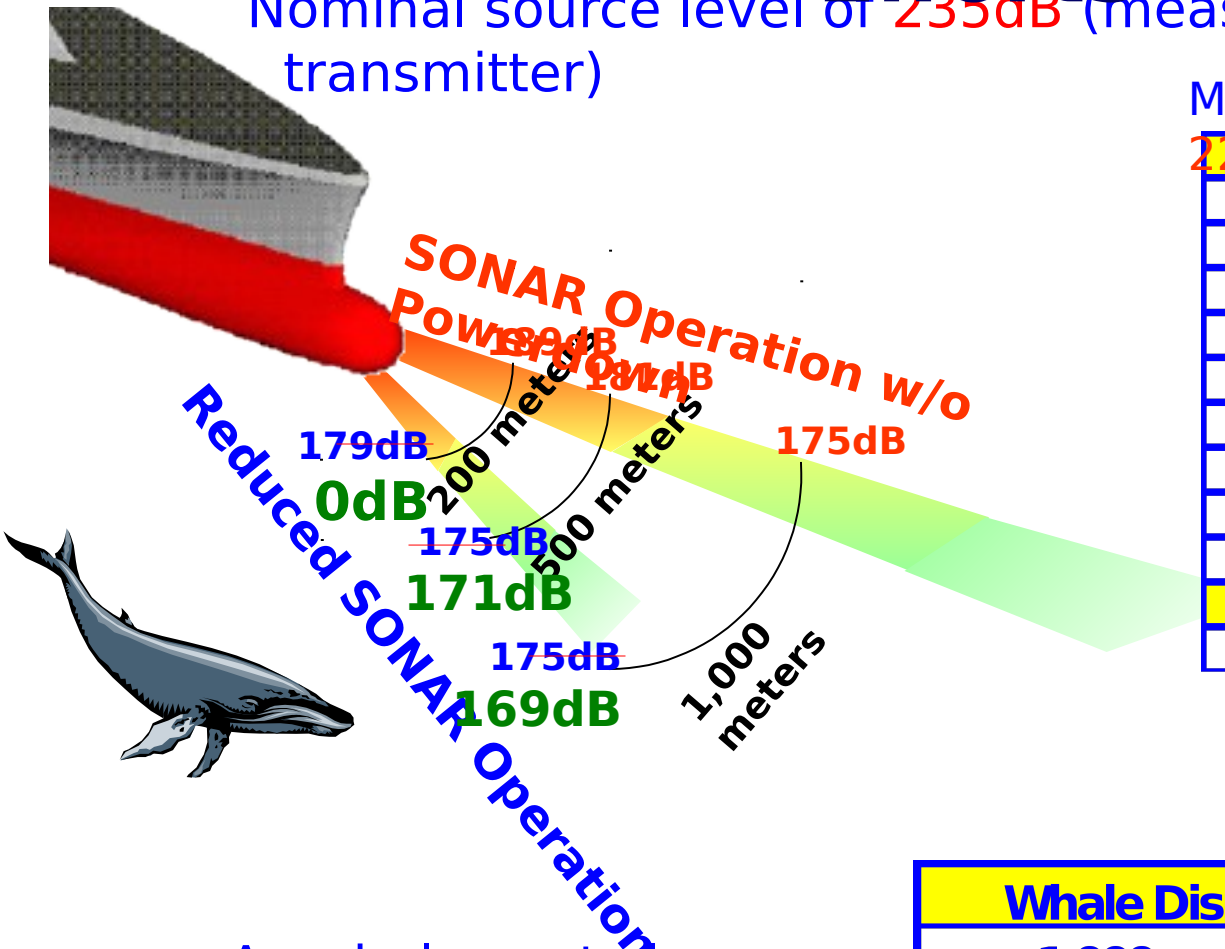
Why the Southern California Operating Area?

Provides Strike Groups the ability to conduct complicated/Integrated SONAR training in the environmental conditions that are similar to those where they



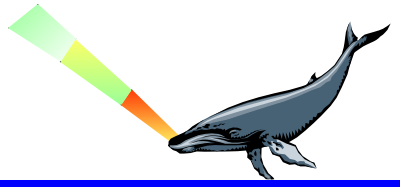
Navy Active SONAR Mitigation Efforts

Nominal source level of 235dB (measured 1 meter from transmitter)



Marine Mammals emit up to 228dB

Whale Type	Max Sound Emission
Blue	188 dB
False Killer	228 dB
Fin	186 dB
Gray	185 dB
Humpback	190 dB
Killer	180 dB
Minke	175 dB
Short-Finned Pilot	180 dB
Sperm	180 dB
Other Mammals	Max Sound Emission
Bottlenose Dolphin	228 dB



As whales get closer, crew reduces SONAR output

Whale Distance	SONAR Reduction
1,000 meters	75%
500 meters	90%
<200 meters	Shut off